

SYSTEM AND METHOD FOR MANAGING MULTICAST GROUP MEMBERSHIP

ABSTRACT

5 A system and method for efficiently managing membership in a multicast
communication group. The system may comprise any number of end nodes (e.g.,
channel adapters, network interface adapters) and routing nodes (e.g., switches),
and the method may be implemented by a processor coupled to any node. Each
node in a network may be a member of the multicast group and/or the multicast
10 tree (MCT) that routes the group's multicast communications. A node need not
be a member of the group to be a member of the tree. Network links included in
the MCT are a subset of a network minimum spanning tree (MST). When a node
is added to the group, the MST is searched from that node until a node within the
MCT is found. Each time a member is removed from the group, the MCT is
15 pruned to reduce unneeded communications.